

**State of California
Environmental Protection Agency (Cal/EPA)
Department of Pesticide Regulation**

**2002 INTEGRATED PEST MANAGEMENT SURVEY OF
CALIFORNIA SCHOOL DISTRICTS
EXECUTIVE SUMMARY**

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Christopher A. Geiger, Ph.D.

Dennis H. Tootelian, Ph.D.

BACKGROUND

In April and May, 2002, the California Environmental Protection Agency's Department of Pesticide Regulation (DPR) conducted a survey of all public school districts in California. This was in response to the Healthy Schools Act of 2000 (HSA) and its mandate to support voluntary integrated pest management (IPM) programs in California schools. This survey is a follow-up to the baseline survey of California school districts conducted in 2001.

The three major purposes of the study were to measure school districts' adoption of IPM, to quantify DPR's progress in implementing the Healthy Schools Act, and to profile districts' pest management activities in terms of demographic and geographic factors. The information obtained from this survey will help evaluate the progress of the California School IPM Program as implementation of the HSA proceeds. The information will also assist in developing and targeting materials to help school districts comply with the law and improve pest management practices.

METHODOLOGY

The population for the study was defined to be all 988 public school districts in California. Whenever possible, surveys were mailed directly to personnel identified by their district as the HSA "designee" or "IPM coordinator." The response rate for the survey was 42% after allowing for invalid addresses. The questionnaire consisted of 21 questions, many of which contained multiple parts. Questionnaires were numbered to identify responding districts for analytical purposes. To track changes in specific pest management practices, questions were focused on two major school pests: ants and weeds. Efforts were made to keep most questions in this survey substantially the same as questions in the 2001 baseline survey.

School districts were categorized according to county and regions. A subset of the survey results were also linked to demographic data, which were obtained from the California Department of Education public schools database. The database identifies the demographics of particular schools based on eight categories: 1=large city, 2=mid-size city, 3=urban

fringes of large city, 4=urban fringes of mid-size city, 5=large town, 6=small town, 7=rural, outside Metropolitan Statistical Area (MSA), 8=rural, inside MSA. These classifications were used in our demographic analyses.

SUMMARY OF FINDINGS

Adoption of an IPM approach by California schools

Most districts (70%) reported that they have adopted IPM programs. The largest group of responding districts indicated that their IPM programs have resulted in more effective pest management, and more than half of the school districts said IPM is not more expensive in the long term. However, cost remains important, with more than one in four districts indicating that adopting IPM has increased their long-term costs. Overall, districts that reported adopting IPM programs were more likely to employ IPM-compatible practices than other districts, with the exception of the use of broadcast herbicides for weeds. Respondents from districts with IPM programs were more frequently satisfied with their district's overall reduction of exposure to pesticides, contracting procedures for hiring outside pest control businesses, communication between district pest managers and other district staff, and other factors related to successful IPM implementation. Districts were least satisfied with the availability of training opportunities in school IPM, suggesting that DPR should direct more efforts towards training.

Monitoring and record keeping are central elements of an IPM program. In the 2002 survey, districts reported keeping more records than they had in 2001. While about 60% of respondents keep records of pest treatments used (as required by the HSA), most do not keep other records important to an IPM program, such as records of building inspections, pest sightings or pest monitoring results. This suggests that the importance of record keeping should be emphasized, and that the distribution and demonstration of convenient pest management record-keeping systems would be beneficial.

Most respondents reported that they treat for ants inside school buildings when ants are first noticed or when a certain number of complaints are received, as opposed to using calendar-based treatments, which are not consistent with an IPM program. The most frequently mentioned methods for managing ants inside school buildings are caulking in cracks, ant baits, and soapy water spray, while the single most commonly used method is ant baits. All three of these methods are considered compatible with an IPM program, and the percentage of districts using them increased significantly since the previous year's survey. However, a small but significant number of districts still use insecticides from aerosol cans—a practice not compatible with any ant IPM program. In light of this finding, further educational efforts could be directed at keeping cans out of the classroom.

While districts were divided as to when they treat for weeds, the single largest group reported treating at regular intervals, as opposed to treating when weeds exceed predetermined thresholds or when weeds are first noticed. Treatment at regular intervals

is considered contrary to IPM principles, at least to the extent that respondents interpreted “treatment” as meaning “spraying.” The most frequently used methods for treating weeds are physical controls (e.g., hand pulling, cultivating, mowing), and regular spot treatment of turf/landscaping with herbicides, while use of mulches and broadcast herbicides scored a distant third and fourth. The percentage of districts using physical controls increased significantly since 2001.

Progress in implementing the Healthy Schools Act

The great majority of districts (87%) are aware of the DPR's California School IPM Program, and most are aware of the various IPM information sources available to them. These findings, coupled with the relatively high usage of DPR brochures/handouts and web site, suggest that DPR has been effective in disseminating information about its program.

The majority of California school districts (71%) are in compliance with at least three of the four major Healthy Schools Act requirements (posting, record keeping, annual notification, and maintaining lists for special notification). The record-keeping requirement shows the most room for improvement, with 60% of respondents reporting compliance with this item. About 49% of respondents reported that their districts had officially adopted all four requirements, and were therefore in full compliance.

Profile of school pest management activities

While over three-quarters of California school districts reported hiring outside pest control businesses, only one in three use contractors for outdoor pest control. Since districts appear more likely to do their own outdoor/landscape pest management activities, DPR should consider devoting a larger proportion of its school IPM trainings to this subject area.

The frequency of community inquiries on pest management issues was highest in southeastern desert areas, urban areas and certain coastal areas of the state. In general, these areas also reported the highest proportion of districts adopting IPM programs. One notable exception is the San Joaquin Valley, which had relatively few community inquiries but a large proportion of districts adopting IPM. Very few school districts in either 2001 or 2002 indicated that they receive calls on more than a monthly basis.

Future directions

The new survey findings suggest that more record keeping and training resources would be helpful to school pest managers. The role of aerosol-can insecticides and broadcast herbicides in school IPM programs should be better addressed, and the emphasis of training programs should be tilted somewhat toward outdoor pest management issues. Comparisons of the 2002 and 2001 surveys show that some progress is being made in the use of IPM-compatible ant and weed controls, and that record keeping measures are improving. Re-administration of this survey in future years will allow for continued monitoring of program effectiveness.

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